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- (4) Any costs associated with exploratory activities;
- (5) Civil or criminal fines or penalties;
- (6) Fees for your royalty relief application; and
- (7) Costs associated with existing obligations (e.g., royalty overrides or other forms of payment for acquiring the lease, depreciation on previously acquired equipment or facilities).
- (c) We may, in reviewing and evaluating your application, disallow costs when you have not shown they are necessary to operate the lease, or if they are inconsistent with end-of-life operations.

[63 FR 2618, Jan. 16, 1998, as amended at 63 FR 57249, Oct. 27, 1998]

§ 203.85 What is in an economic viability and relief justification report?

This report should show that your project appears economic without royalties and sunk costs using the RSVP model we provide. The format of the report and the assumptions and parameters we specify are found in the "Guidelines for the Application, Review, Approval and Administration of the Deep Water Royalty Relief Program," U.S. Department of the Interior, MMS. Clearly justify each parameter you set in every scenario you specify in the RSVP. You may provide supplemental information, including your own model and results. The economic viability and relief justification report must contain the following items for an oil and gas lease.

- (a) Economic assumptions we provide which include:
- (1) Starting oil and gas prices;
- (2) Real price growth;
- (3) Real cost growth or decline rate, if anv:
 - (4) Base year;
 - (5) Range of discount rates; and
- (6) Tax rate (for use in determining after-tax sunk costs).
- (b) Analysis of projected cash flow (from the date of the application using annual totals and constant dollar values) which shows:
 - (1) Oil and gas production;
 - (2) Total revenues;
 - (3) Capital expenditures;
 - (4) Operating costs;
 - (5) Transportation costs; and

- (6) Before-tax net cash flow without royalties, overrides, sunk costs, and ineligible costs.
 - (c) Discounted values which include:
- (1) Discount rate used (selected from within the range we specify).
- (2) Before-tax net present value without royalties, overrides, sunk costs, and ineligible costs.
 - (d) Demonstrations that:
- (1) All costs, gross production, and scheduling are consistent with the data in the G&G, engineering, production, and cost reports (§§ 203.86 through 203.89) and
- (2) The development and production scenarios provided in the various reports are consistent with each other and with the proposed development system. You can use up to three scenarios (conservative, most likely, and optimistic), but you must link each to a specific range on the distribution of resources from the RSVP Resource Module.

§ 203.86 What is in a G&G report?

This report supports the reserve and resource estimates used in the economic evaluation and must contain each of the following elements.

- (a) Seismic data which includes:
- (1) Non-interpreted 2D/3D survey lines reflecting any available state-of-the-art processing technique in a format readable by MMS and specified by the deep water royalty relief guidelines:
- (2) Interpreted 2D/3D seismic survey lines reflecting any available state-of-the-art processing technique identifying all known and prospective pay horizons, wells, and fault cuts;
- (3) Digital velocity surveys in the format of the GOM region's letter to lessees of 10/1/90;
 - (4) Plat map of "shot points;" and
- (5) "Time slices" of potential horizons.
 - (b) Well data which includes:
- (1) Hard copies of all well logs in which— $\,$
- (i) The 1-inch electric log shows pay zones and pay counts and lithologic and paleo correlation markers at least every 500-feet.
- (ii) The 1-inch type log shows missing sections from other logs where faulting occurs.

- (iii) The 5-inch electric log shows pay zones and pay counts and labeled points used in establishing resistivity of the formation, 100 percent water saturated ($R_{\rm o}$) and the resistivity of the undisturbed formation ($R_{\rm t}$), and
- (iv) The 5-inch porosity logs show pay zones and pay counts and labeled points used in establishing reservoir porosity or labeled points showing values used in calculating reservoir porosity such as bulk density or transit time;
- (2) Digital copies of all well logs spudded before December 1, 1995;
 - (3) Core data, if available;
 - (4) Well correlation sections;
 - (5) Pressure data;
 - (6) Production test results;
- (7) Pressure-volume-temperature analysis, if available; and
- (8) A table listing the wells and completions, and indicating which sands and fault blocks will be targeted for completion or recompletion.
- (c) Map interpretations which includes for each reservoir in the field:
- (1) Structure maps consisting of top and base of sand maps showing well and seismic shot point locations;
- (2) Isopach maps for net sand, net oil, net gas, all with well locations;
- (3) Maps indicating well surface and bottom hole locations, location of development facilities, and shot points; and
- (4) An explanation for excluding the reservoirs you are not planning to develop.
- (d) Reservoir-specific data which includes:
- (1) Probability of reservoir occurrence with hydrocarbons;
- (2) Probability the hydrocarbon in the reservoir is all oil and the probability it is all gas;
- (3) Distributions or point estimates (accompanied by explanations of why distributions less appropriately reflect the uncertainty) for the parameters used to estimate reservoir size, *i.e.*, acres and net thickness;
- (4) Most likely values for porosity, salt water saturation, volume factor for oil formation, and volume factor for gas formation;
- (5) Distributions or point estimates (accompanied by explanations of why distributions less appropriately reflect

- the uncertainty) for recovery efficiency (in percent) and oil or gas recovery (in stock-tank-barrels per acre-foot or in thousands of cubic feet per acre foot):
- (6) A gas/oil ratio distribution or point estimate (accompanied by explanations of why distributions less appropriately reflect the uncertainty) for each reservoir;
- (7) A yield distribution or point estimate (accompanied by explanations of why distributions less appropriately reflect the uncertainty) for each gas reservoir; and
- (8) Reserve or resource distribution by reservoir.
- (e) Aggregated reserve and resource data which includes:
- (1) The aggregated distributions for reserves and resources (in BOE) and oil fraction for your field computed by the resource module of our RSVP model;
- (2) A description of anticipated hydrocarbon quality (*i.e.*, specific gravity); and
- (3) The ranges within the aggregated distribution for reserves and resources that define the development and production scenarios presented in the engineering and production reports. Typically there will be three ranges specified by two positive reserve and resource points on the aggregated distribution. The range at the low end of the distribution will be associated with the conservative development and production scenario; the middle range will be related to the most likely development and production scenario; and, the high end range will be consistent with the optimistic development and production scenario.

[63 FR 2618, Jan. 16, 1998, as amended at 67 FR 1879, Jan. 15, 2002]

§ 203.87 What is in an engineering report?

This report defines the development plan and capital requirements for the economic evaluation and must contain the following elements.

- (a) A description of the development concept (e.g., tension leg platform, fixed platform, floater type, subsea tieback, etc.) which includes:
- (1) Its size along with basic design specifications and drawings; and
 - (2) The construction schedule.